





## - Lessons from the Field -

## Knowing the Facts About Fentanyl

JANUARY 17, 2023 3:00 - 4:30 PM ET



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## **NCSSLE** Website

#### HTTPS://SAFESUPPORTIVELEARNING.ED.GOV

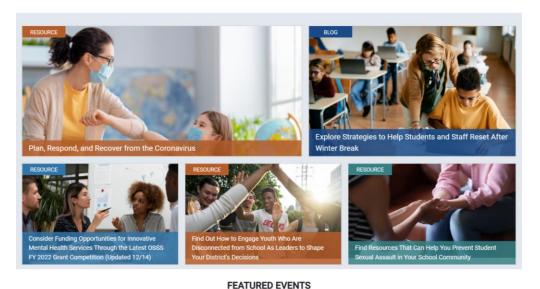




To access information and archived materials from previous Lessons from the Field webinars, go to:

https://safesupportivelearning.ed.gov/lessons-field-webinar-series

















This webinar is being recorded and will be archived at the following location:

https://safesupportivelearning.ed.gov/events/webinar/lessons-field-webinar-part-1-knowing-facts-about-fentanyl



## Agenda

- 1) Introduction and Logistics
- 2) Welcome
- 3) Setting the Context and Understanding the Facts
- 4) Addressing the Fentanyl Problem
- 5) Closing Remarks
- 6) Live Q&A



## **Context Setting Speakers**

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Family Impacted by Fentanyl, Family Advocate and Speaker, CA

## Dr. Cecelia Spitznas

Senior Science Policy Advisor, Director's Office, Office for National Drug Control Policy

#### Marci Hertz

Associate Director, Program Implementation, Division of Overdose Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (CDC)

## Dr. Emily Einstein

Branch Chief, Science Policy Branch, Office of Science Policy and Communications, National Institute on Drug Abuse, National Institutes of Health (NIDA/NIH)

#### Cathleen Drew

Senior Prevention Program Manager, Community Outreach & Prevention Support Section, Drug Enforcement Administration (DEA)

## Jennifer Epstein

Director, Outreach and Education, Song for Charlie, OR

### Kristen Gustafson

Secondary Health & PE Curriculum, Instruction, and Assessment Director, Teacher on Special Assignment (TOSA), Beaverton School District, OR

Bios for the speakers are archived at the following location:







# BEST PRACTICES CLEARINGHOUSE



## Elyse Robertson

FEDERAL PROGRAM OFFICER
OFFICE OF SAFE AND SUPPORTIVE SCHOOLS
U.S. DEPARTMENT OF EDUCATION







# BEST PRACTICES CLEARINGHOUSE



## Chris Didier

FAMILY IMPACTED BY FENTANYL PARENT ADVOCATE DIDIER.CJ@GMAIL.COM



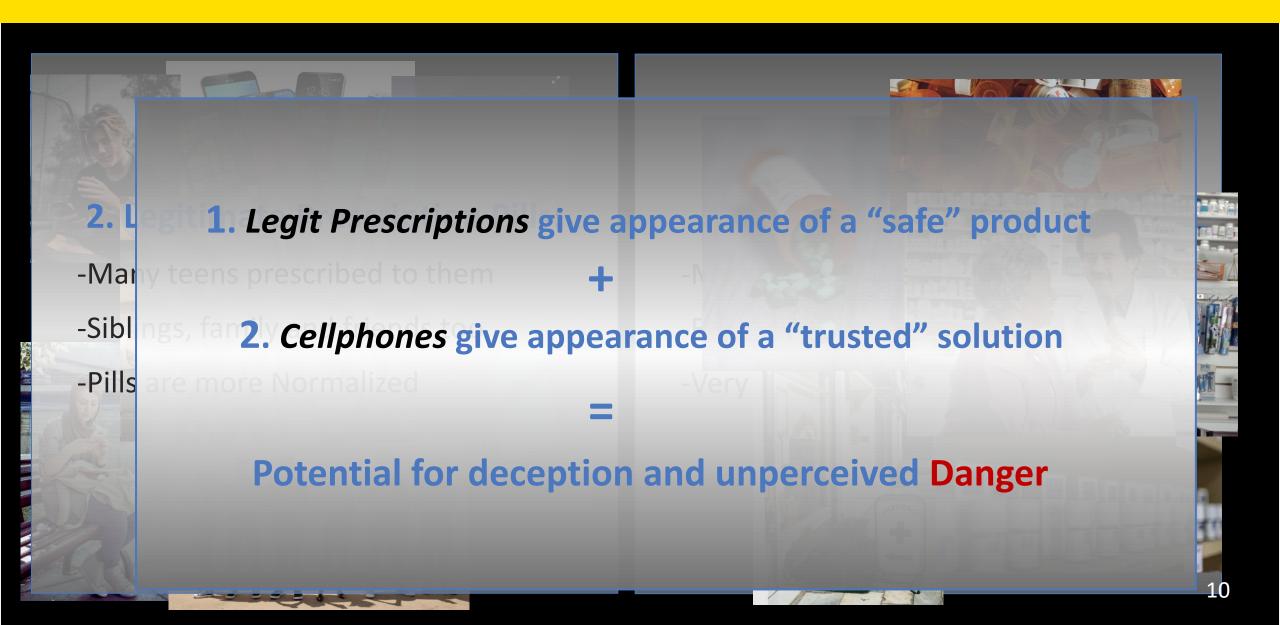
### WHAT HAPPENED TO ZACHARY

- Zach bought a Percocet via social media.
- But the pill was a counterfeit made of fentanyl; aka: 'Fake Pill.'
- Zach died shortly after in his room. He never had a chance.

## TOXICOLOGY RESULTS: Fentanyl intoxication. (No Percocet)

• Not a party death; not an overdose; not an addiction casualty

### 2 INFLUENCERS:



### **FENTANYL IN VAPES**







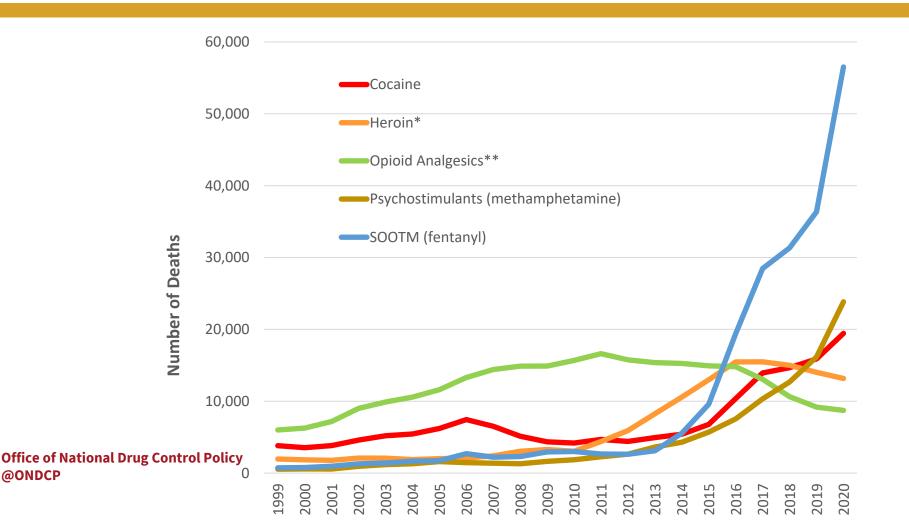


# Fentanyl and Youth: An Update for Educators

Cecelia Spitznas, Ph.D.,
The White House



## Drug Poisoning Deaths Involving Selected Drug Classes 1999-2020





@ONDCP

# What is Fentanyl?

- Opioid—a drug that binds to & activates opioid receptors in brain & body
- Fast-acting & short-acting
- Highly potent—many times stronger than morphine
- Analgesic pain medicine
- Anesthetic sensation dulling medicine
- Synthetic—100% man-made (many other opioids come from poppy)
- Both an FDA approved medicine and an illicitly imported drug



# Medical Fentanyl-Used for Serious Conditions and Surgery

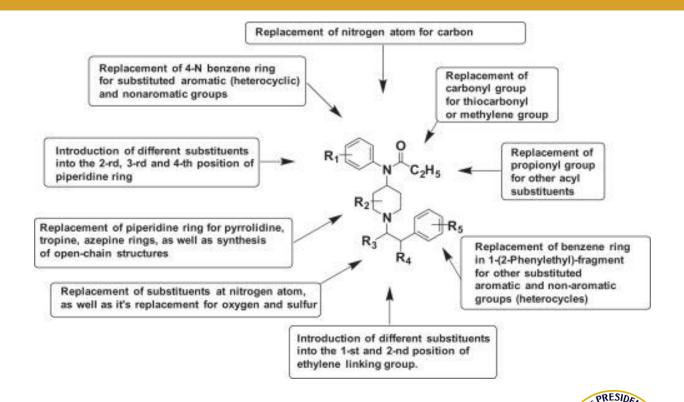
- Fentanyl is short-acting and has many surgical and medical uses
- An Anesthesiologist or Nurse Anesthetist can infuse tiny doses by IV during surgery that wear off quickly
- Surgeons have <u>a whole team to maintain patient's airway</u>
- Short-acting medicine (lozenges, tablets) for uncontrolled "breakthrough pain" add to regimen that requires round-the-clock pain care
- Fentanyl patch: a time release patch for long duration pain control. Indicated for certain types of chronic pain when other medicines are no longer working
- Label for prescription products instructs prescribers never to use on patients without opioid tolerance (recent experience with use) or as round-the-clock opioids.
- Fentanyl can cause sedation in inexperienced people
- It is addictive





# What are Fentanyl Analogues?

- Medications and illegal synthetic opioids that are similar to, but chemically slightly different than fentanyl
- Changes in chemical structure can increase or decrease binding
- Carfentanil—a veterinary drug for large animals is many times more potent than human medication
- More dangerous if more potent







## Fentanyl "Misuse" & Illicit Use

- People in opioid addiction treatment do report misuse of prescription fentanyl products (Schepis, et al. 2019.)<sup>1</sup>
- However, generally deaths & law enforcement seizures involve Illicitly imported fentanyl NOT pharmaceutical fentanyl (Gladden, et al. 2016.) 2

- 1. Schepis TS, McCabe VV, Boyd CJ, McCabe SE. The epidemiology of prescription fentanyl misuse in the United States. Addict Behav. 2019;96:89-93. doi:10.1016/j.addbeh.2019.04.022 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6579694/pdf/nihms-1528646.pdf
- 2. Gladden RM, Martinez P, Seth P. Fentanyl Law Enforcement Submissions and Increases in Synthetic Opioid-Involved Overdose Deaths 27 States, 2013-2014. MMWR Morb Mortal Wkly Rep 2016;65(33):837-843. Published 2016 Aug 26. doi:10.15585/mmwr.mm6533a2 <a href="https://www.cdc.gov/mmwr/volumes/65/wr/mm6533a2.htm">https://www.cdc.gov/mmwr/volumes/65/wr/mm6533a2.htm</a>

# Why Are We Seeing Synthetic Drugs Now?

- Opioid tolerance develops over time requiring higher doses or more potent products
- Existing market 2000-2012 of people who were prescription opioid dependent & ready for a more potent product
- Fentanyl analogues previously not controlled
- Easy to create and ship clandestinely vs plant-based drugs
  - Made in labs so no need to hide fields of flowering plants (e.g. poppy for heroin)
  - Concentration/potency means much smaller packaging
  - Hard to search all packages and containers entering the country, especially via the mail
  - Can slip into pills or powder drugs can be made from them; they can be mixed into routinely used illicit drugs









# BEST PRACTICES CLEARINGHOUSE



## Cathleen Drew

SENIOR PREVENTION PROGRAM MANAGER
COMMUNITY OUTREACH & PREVENTION SUPPORT SECTION
DRUG ENFORCEMENT ADMINISTRATION (DEA)







## **Illicit Opioids**









The record quantities of fentanyl that DEA seized in 2021 are enough to kill every American.





# Potentially Lethal Dose of Fentanyl





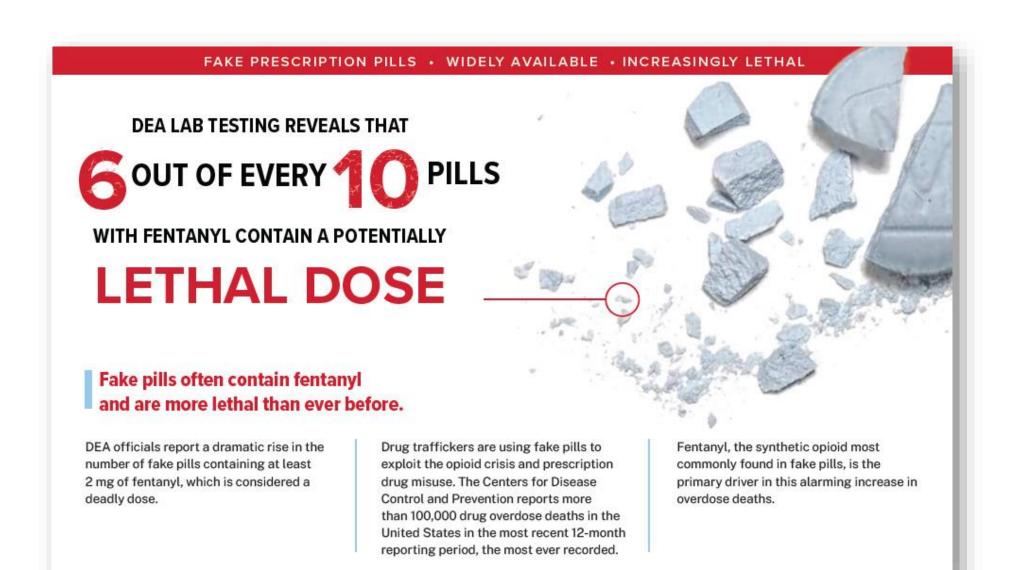
## Fake Pills

- Drug traffickers are using fake pills to exploit the opioid crisis and prescription drug misuse in the U.S.
- Even if users know they're not actually prescription pills, there's no way to tell how much fentanyl a pill might contain.
- If users believe they are handling actual prescription pills, there's an even greater danger of overdose.



Made to look like prescription opioids—such as oxycodone, hydrocodone, and alprazolam; or stimulants like amphetamines—but contain fentanyl or meth



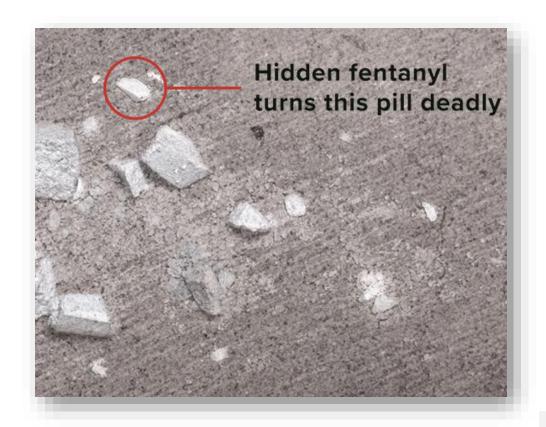




## Recent Alarming Trends that are Increasing the Levels of Risk for our Youth

# A recent study revealed teens are underestimating the dangers of fentanyl:

- Only one-third to one-half of young Americans
   KNOW that fake pills are manufactured with fentanyl
- Only 40% of Americans aged 13-24, and 31% of teens called themselves knowledgeable about fentanyl





## **Most Common Counterfeit Pills**



Oxycontin<sup>®</sup>



Adderall®



Xanax<sup>®</sup>





## **Authentic** Oxycodone





Fake Oxycodone







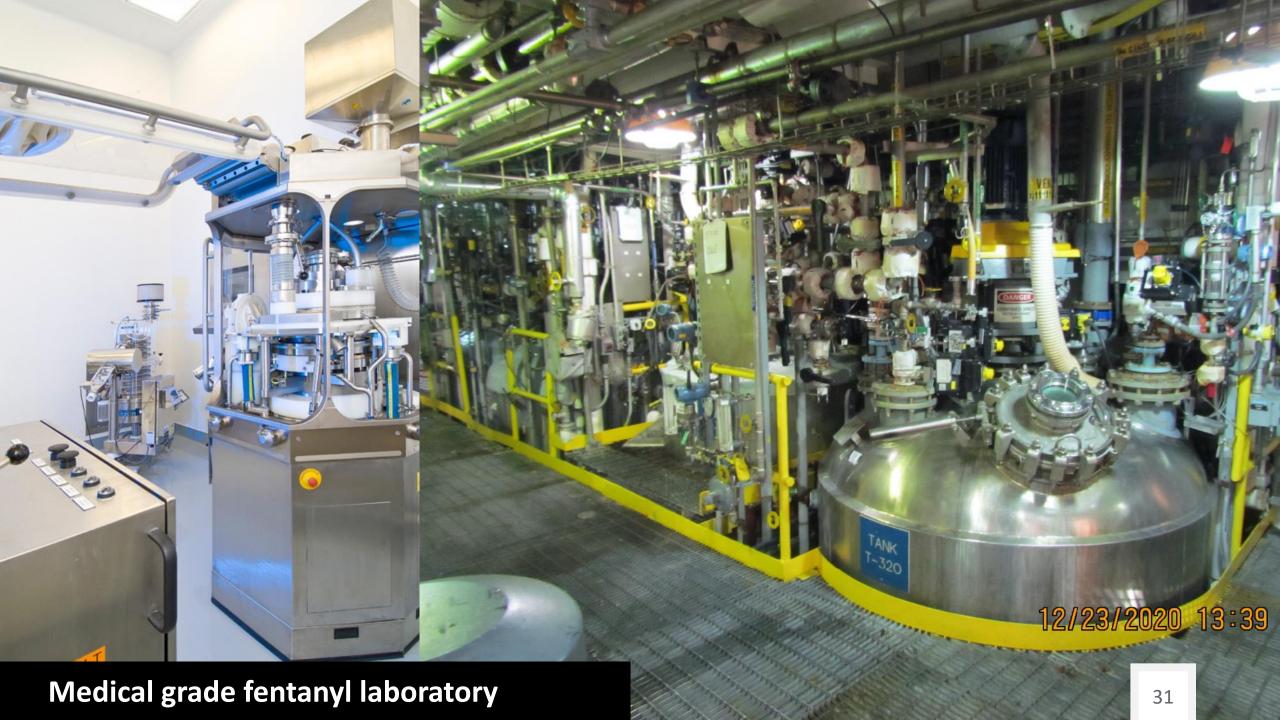


### **Authentic** Xanax

Fake Xanax





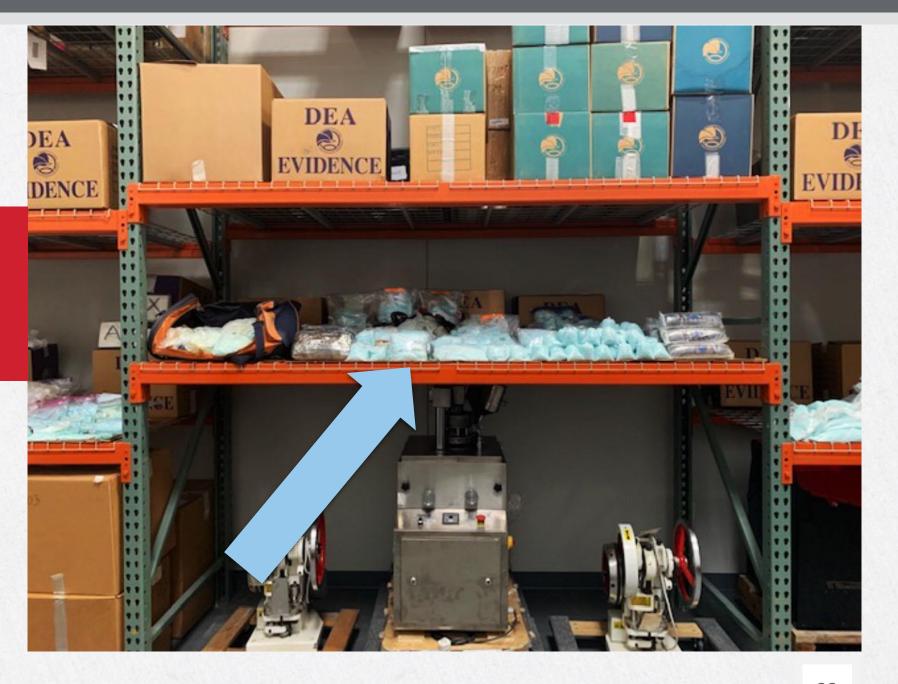






Shelf contains approximately
1.2 Million
Fentanyl Pills







## **Street Names**

## Fentanyl

- Apache
- China Girl
- China Town
- Dance Fever
- Friend
- Goodfellas

- Great Bear
- He-Man
- Jackpot
- King Ivory
- Murder 8
- Tango & Cash

## **Opioids/Narcotics**

- Smack
- Horse
- Mud
- Brown Sugar
- Junk
- Black Tat
- Big H

- Dover's Powder
- MPTP (New Heroin
- Lean or
  - Purple Drank
- OC, Ox, Oxy
- Oxycotton
- Sippin Syrup







## **Additional Threat: Access**

Fake Rx pills are easily accessible & often sold on social media & e-commerce platforms; available to anyone with a smartphone.



## **Prevention Support Resources**

#### **Websites**



For Parents, Educators, and Caregivers



For Teens



For Teachers
For the Workplace



www.campusdrugprevention.gov

For Higher Education



## **Prevention Support Resources**

#### **Publications**





### Working to Help Make Communities Safer and Healthier

#### **Contact Information**

Catie Drew
DEA Community Outreach and Prevention Support
Office of Congressional & Public Affairs

Call us: 202.307.7936

Email us: <a href="mailto:community.outreach@dea.gov">community.outreach@dea.gov</a>

Online: dea.gov/community-outreach









## BEST PRACTICES CLEARINGHOUSE



#### Marci Hertz

ASSOCIATE DIRECTOR, PROGRAM IMPLEMENTATION
DIVISION OF OVERDOSE PREVENTION
NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL
CENTERS FOR DISEASE CONTROL AND PREVENTION

## Lessons from the Field: Fentanyl

U.S. Department of Education and Center for Disease Control and Prevention

#### Marci Hertz, MS Associate Director

Associate Director for Program Implementation
Division of Overdose Prevention
National Center for Injury Prevention and Control

**January 17, 2023** 





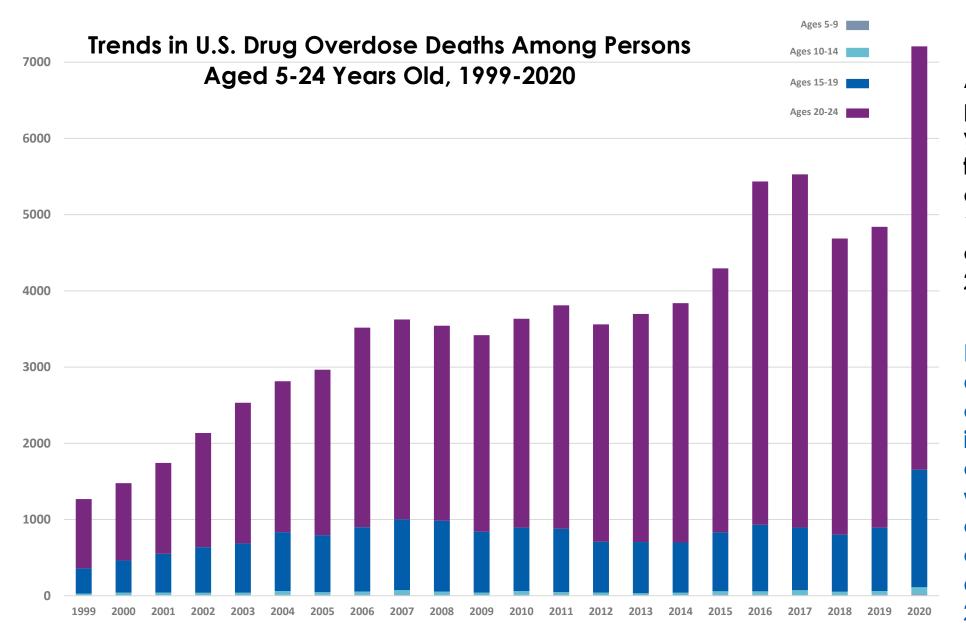
### **Fentanyl Overview**

- Synthetic opioid that is up to 50 times stronger than heroin and 100 times stronger than morphine (DEA, 2020)
- Two types:
  - Pharmaceutical fentanyl
  - Illicitly manufactured fentanyl (IMF)
- Estimated that by 2029, over 1.2 million people will die from fentanyl and other opioids if no action is taken
- Youth at-risk due to:
  - Drugs laced with fentanyl are more available and accessible—including in counterfeit pills commonly available to youth and young adults via social media platforms (DEA, 2021)
  - Low tolerance threshold
  - Lack of awareness about fentanyl and its presence in other substances



Counterfeit pills often contain fentanyl and are more lethal than ever before. These pills are easy to purchase and look like prescription drugs.

**Number of Deaths** 

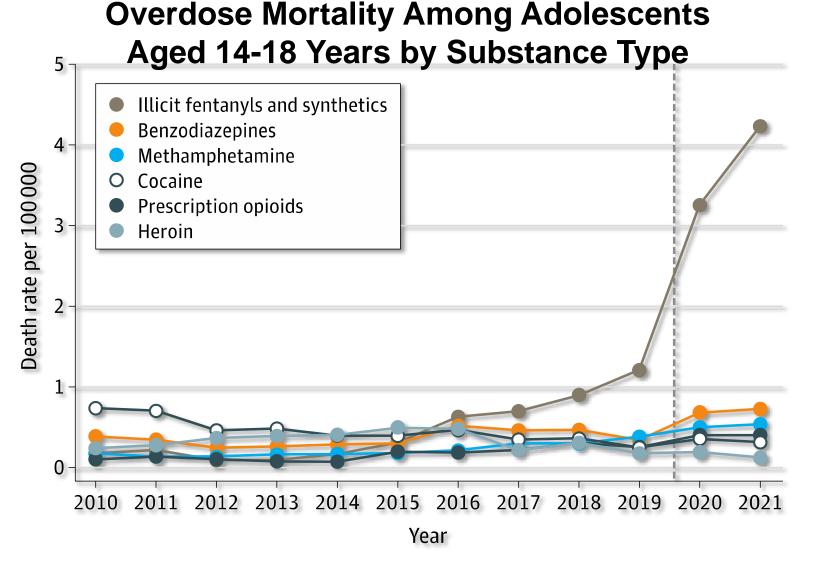


Almost 80,000 people aged 5-24 years have died from a drug overdose since 1999, (including over 27,500 from 2015-2020).

Nearly 25% of adolescent overdose deaths involved counterfeit pills which often contain fentanyl or other illicit drugs (Tanz et al. 2022).

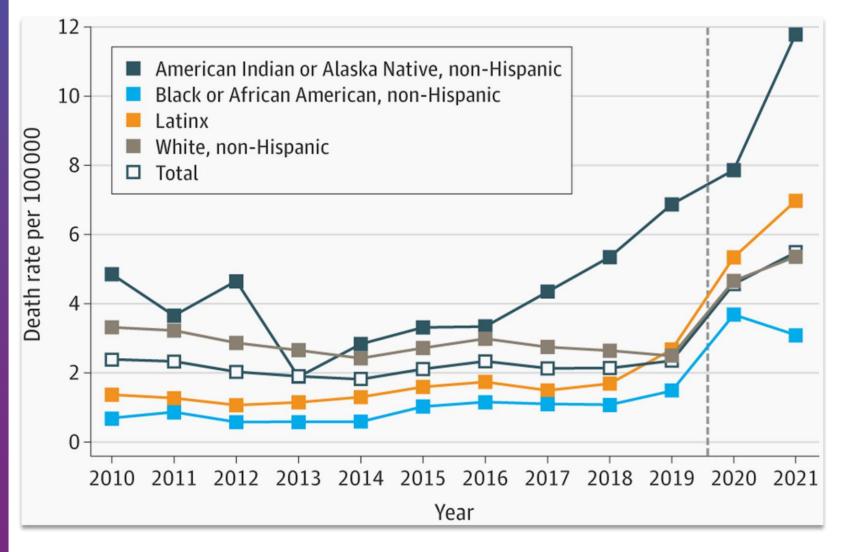
42

Overdose mortality in adolescents has risen dramatically, driven by illicitly-manufactured fentanyl



Friedman J, Godvin M, Shover CL, Gone JP, Hansen H, Schriger DL. Trends in Drug Overdose Deaths Among US Adolescents, January 2010 to June 2021. *JAMA*. 2022;327(14):1398–1400

Compared with the gap among adults, the gap in overdose deaths between AI/AN populations and White Americans is even higher among adolescents



Friedman J, Godvin M, Shover CL, Gone JP, Hansen H, Schriger DL. Trends in Drug Overdose Deaths Among US Adolescents, January 2010 to June 2021. *JAMA*. 2022;327(14):1398–1400.

### Youth High Risk Substance Use

#### Risk Factors for High-Risk Substance Use

Risk factors for youth high-risk substance use can include:

- Family history of substance use
- Favorable parental attitudes towards the behavior
- Poor parental monitoring
- Parental substance use
- Family rejection of sexual orientation or gender identity
- Association with delinquent or substance using peers
- Lack of school connectedness
- Low academic achievement
- Childhood sexual abuse
- Mental health issues

#### High-Risk Substance Use Prevention

Research has improved our understanding of factors that help buffer youth from a variety of risky behaviors, including substance use.

These are known as protective factors. Some protective factors for high risk substance use include:

- Parent or family engagement
- Family support
- Parental disapproval of substance use
- Parental monitoring
- School connectedness

https://www.cdc.gov/healthyyouth/substance-use/index.htm

### Promote Safe & Supportive Environments

We can all play a role in preventing overdose deaths by...



- 1. Educating about the dangers of illicitly manufactured fentanyl (IMFs) and counterfeit pills
- 2. Having naloxone available
- 3. Ensuring access to effective, evidence-based treatment for substance use disorders and mental health conditions
- 4. Educating family and friends to recognize drug use warning signs
- 5. Learning how to respond to an overdose
- 6. Monitoring youth who exhibit risky behaviors





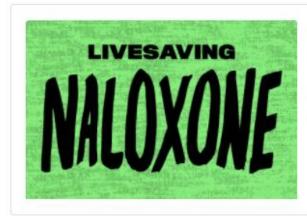




Fentanyl is up to 50x more potent than heroin and 100x more potent than morphine. Learn more about the dangers of fentanyl and how it has taken over the drug supply.



Polysubstance use occurs when two or more drugs are taken together, either intentionally or unintentionally. Learn more about the risks and consequences of mixing different types of drugs.



Naloxone is a safe medication that can reverse an overdose from opioids, including heroin and fentanyl. Learn more about where to get naloxone and how to use it.



Addiction is a disease, not a character flaw. There are many ways to treat substance use disorders.

Learn more about what options are available and how to support loved ones on their recovery journey.

### Thank you!



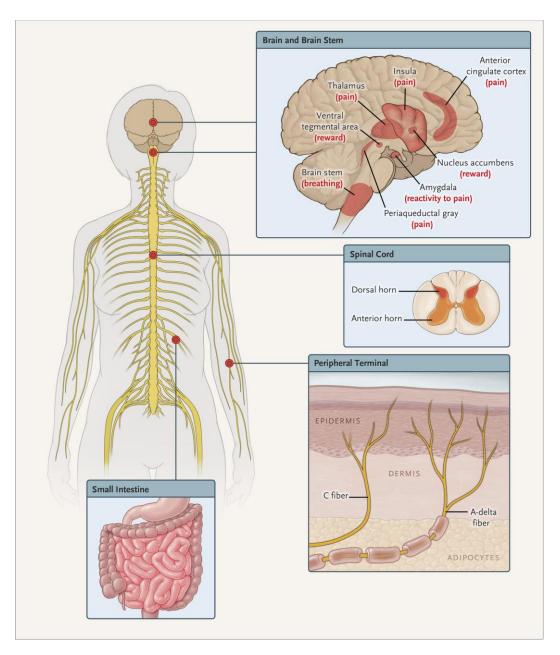
The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention. Fentanyl and the Brain

Emily B. Einstein, Ph.D.
Chief of Science Policy
National Institute on Drug Abuse

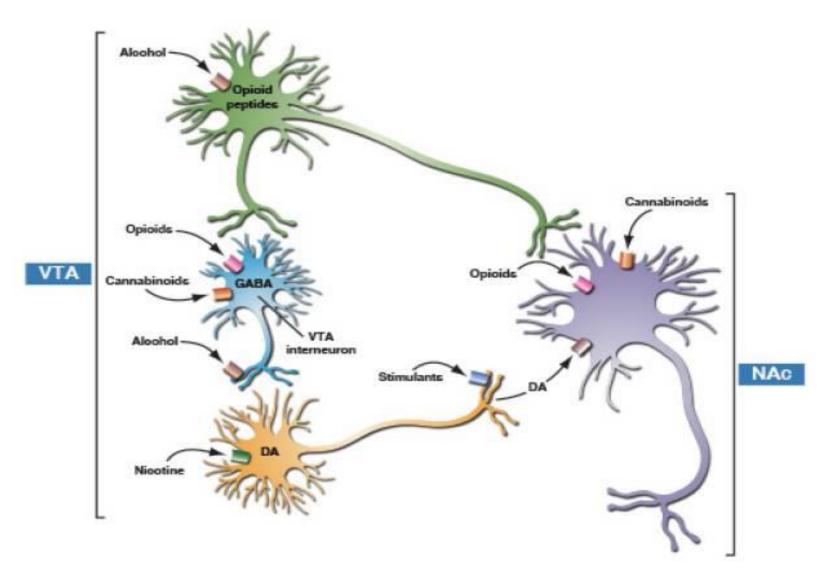




# μ-Opioid Receptors in the Brain and Body



### **Drugs and Natural Rewards ACTIVATE Dopamine in Reward Regions**

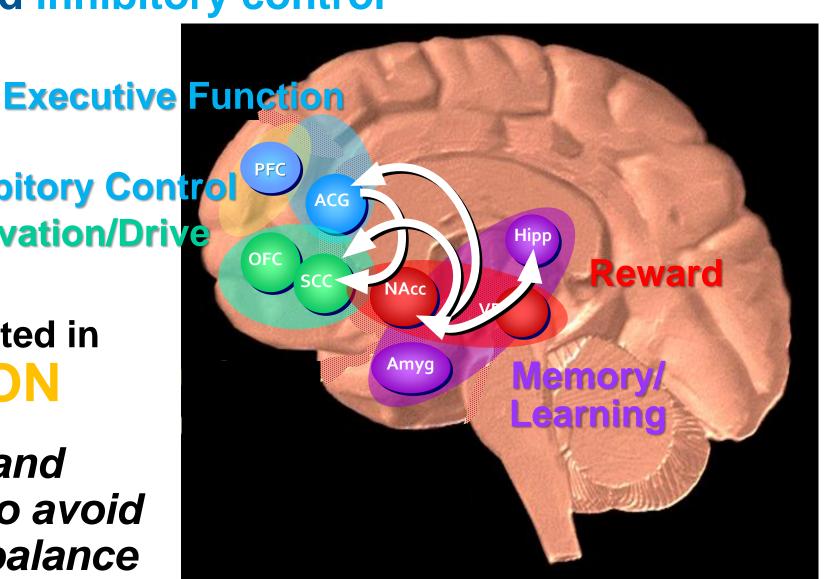


The fine balance in connections that normally exists between brain areas active in reward, motivation, learning and memory, and inhibitory control

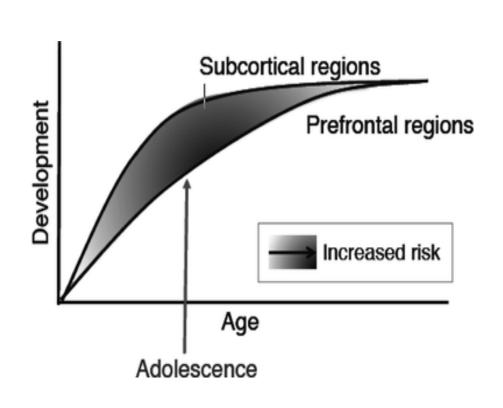
> **Inhibitory Control Motivation/Drive**

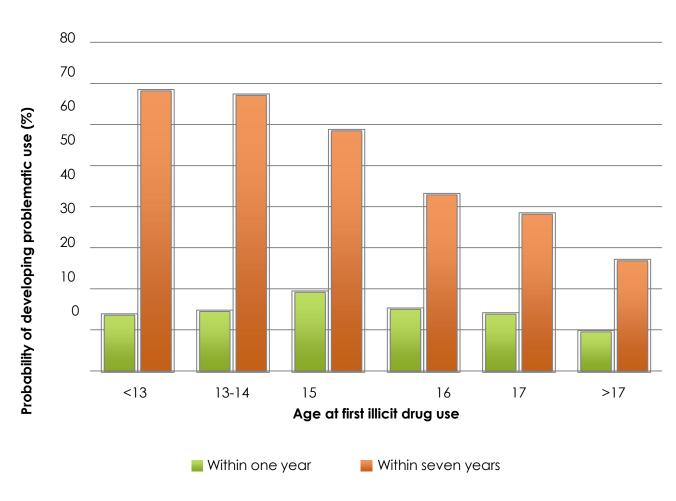
becomes severely disrupted in **ADDICTION** 

Prevention and Treatment aim to avoid or restore this balance



## Increased Risk of Addiction with Early Initiation

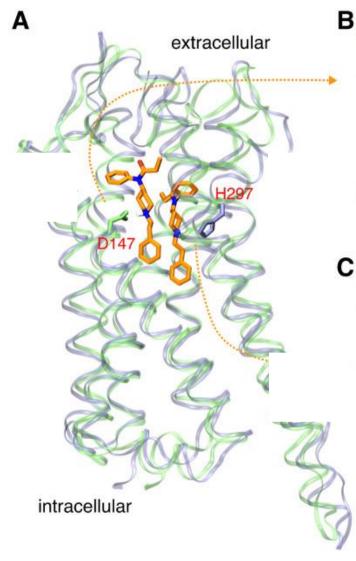




Source: Anthony and Petronus Drug and Alcohol Dependence 1995

#### Fentanyl: High Risk of Overdose

- Fentanyl is extremely potent and enters the brain very rapidly
- Its respiratory depressant effect can be maximized within 2 minutes of injection
- Someone experiencing a fentanyl overdose may exhibit:
  - Unconsciousness
  - Vomiting
  - Slow/shallow breathing
  - Very small pupils
  - Purple lips/fingernails



**Fentanyl binding with mOR** -- Overlay of the representative simulation snapshots showing mOR is bound to fentanyl in the D147-(green) and H297- (purple) binding modes

## The Current Drug Supply is Much More Dangerous Than Ever Before

The New York Times

DEA

BULLETIN

### In Cities Where It Once Reigned, Heroin Is Disappearing

UNCLASSIFIED



(U) This DEA Bulletin is based on preliminary reporting and may be subject to updating as additional information becomes available.

DEA-MIA-BUL-039-18 FEBRYARY 2018 DEA Issues Public Safety Alert on Sharp Increase in Fake Prescription Pills Containing Fentanyl and Meth

DEA Warns that International and Domestic Criminal Drug Networks are Flooding the United States with Lethal Counterfeit Pills

### Naloxone

**REVERSES OPIOID OVERDOSE** 

Naloxone is an opioid receptor antagonist. It blocks activity of opioid receptors in the brain to reverse opioid overdose.

Narcan<sup>®</sup>, Kloxxado<sup>®</sup>, Generics available

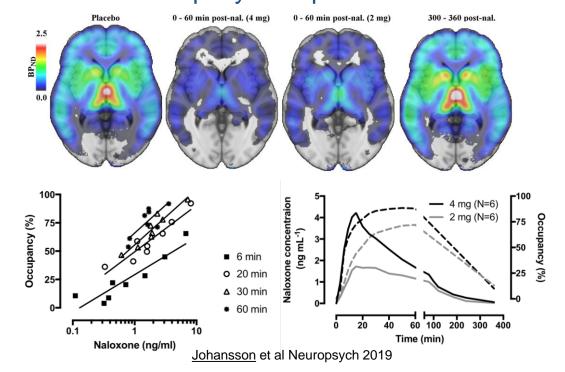
—(|• = Opioid Receptor Antagonist

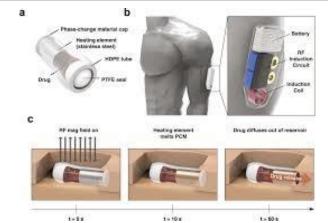


### **Treating Fentanyl Overdoses**

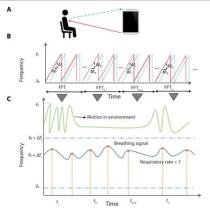
- Deaths increasing despite naloxone
- OD require multiple naloxone doses
- Naloxone t<sub>1/2</sub> (1.3–2.4 h) shorter than fentanyl (7-8 h)
- Very fast entry of fentanyl into brain

 Chest wall rigidity from fentanyl Naloxone rapidly occupies MOR in brain





Automatic naloxone autoinjector

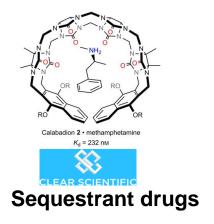


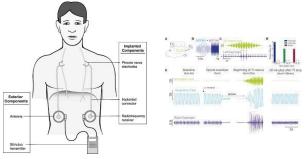
**Cellphone OD detection** 



mAntibodies Fentanyl

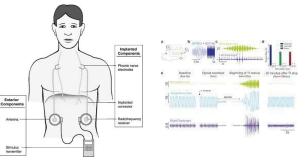
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**Longer acting MOR** antagonists

Nalmefene



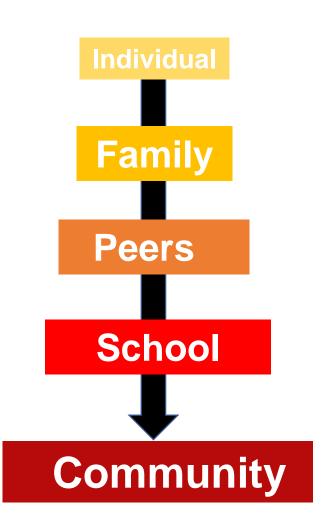
**Breathing stimulators** 

### Drug Use and Addiction Can be Prevented Prevention Intervention Strategies

#### **Decrease RISK**



Early Aggressive Behavior
Poor Social Skills
Lack of Parental Supervision
Neglect
Substance Use
Drug Availability
Poverty

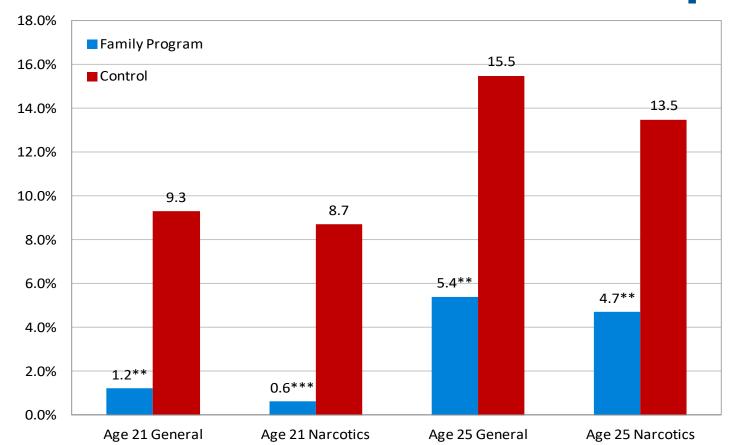


#### **Enhance PROTECTION**



Self Control
Parental Monitoring & Support
Positive Relationships
Academic Competence
Anti-Drug Use Policies
Strong Neighborhood

## **Universal Substance Use Prevention May Reduce Later Misuse of Opioids**



Targeting Youth to
Prevent Later Substance
Use Disorder: An
Underutilized Response
to the US Opioid Crisis

WM Compton, CM Jones, GT Baldwin, et al. *AJPH.* 2019;109:2185-S189.

In this study, for every 100 young adults in general population starting opioid misuse, only 35 young adults from an intervention community started.

### emily.einstein@nih.gov







### BEST PRACTICES CLEARINGHOUSE



### Jennifer Epstein

DIRECTOR, OUTREACH AND EDUCATION SONG FOR CHARLIE



### NCSSLE Lessons from the Field – Knowing the Facts About Fentanyl

January 17, 2023 | Jennifer Epstein



### With Fentanyl in the Drug Supply, the Number of Young Victims is on the Rise



Coty (forever 17)



Luca (forever 13)



Zach (forever 17)



Issaiah (forever 15)



Olivia (forever 15)



Zelaya (forever 17)



Kinhthi (forever 19)



Brian (forever 18)



Zachariah (forever 17)

Layno (forever 15)



Ellison (forever 17)



Tristain (forever 16)



Makayla (forever 16)



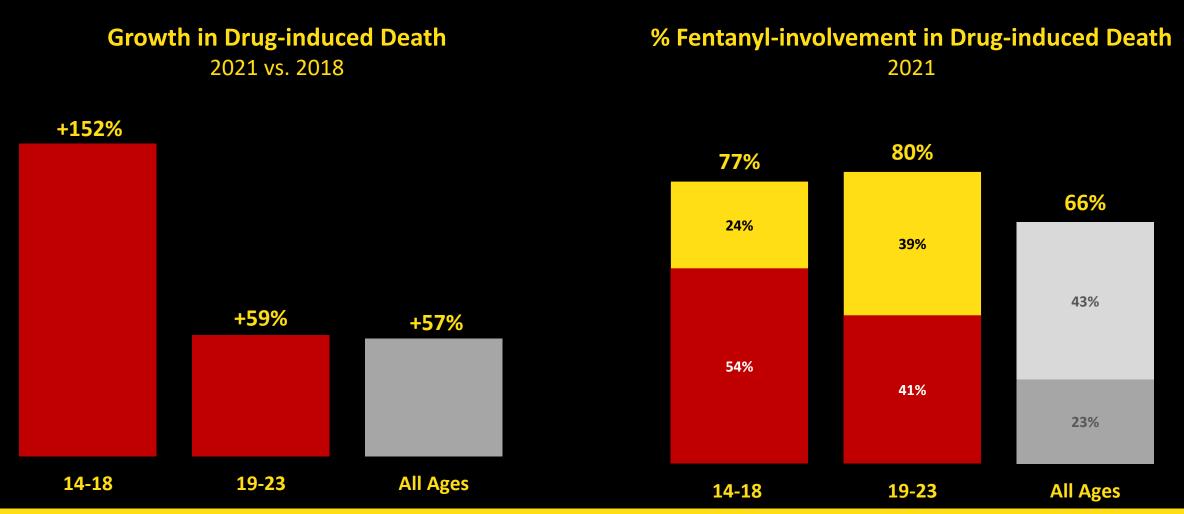
Cal (forever 18)



Deenilson (forever 19)



### Youth are Disproportionately Impacted by Fentanyl



Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Provisional Mortality on CDC WONDER. Accessed at <a href="http://wonder.cdc.gov/mcd-icd10-provisional.html">http://wonder.cdc.gov/mcd-icd10-provisional.html</a> in Oct, 2022. "Fentanyl" = MCD T40.4: synthetic opioid analgesics other than methadone, including drugs such as fentanyl and tramadol

"fentanyl only": no other opioids, cocaine, benzos, amphetamines

"fentanyl +": fentanyl + other substance



### **Youth Survey Research**

- Commissioned by Song for Charlie and executed by Breakwater Strategy online August 2022
- In addition to questions on fentanyl & counterfeit pill knowledge, questions were asked on mental health, substance use motivations, peer perceptions, & social media.

#### Full study:

https://www.songforcharlie.org/post/song-for-charlie-youth-fentanyl-survey-fall-2022

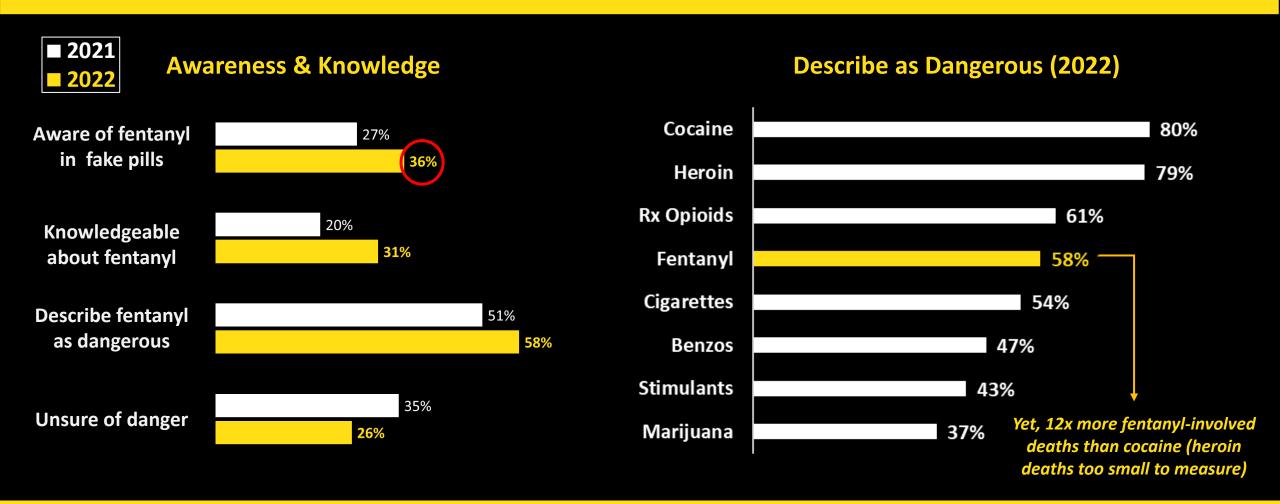


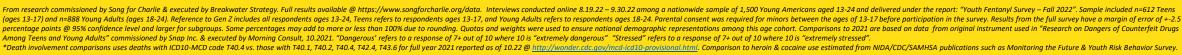
- Nationwide sample of 1,500 Young Americans aged 13-24; n=612 Teens (13-17) and n=888 Young Adults (18-24)
- Margin of error of plus or minus 2.5 percentage points at the 95% confidence level
- Quotas and weights were used to ensure age cohort national demographic representation
- "Aware", "Knowledgeable", & "Dangerous" refer to responses of 7+ out of 10
- Comparisons to 2021 are based on data from "Research on Dangers of Counterfeit Drugs Among Teens and Young Adults" commissioned by Snap Inc. & executed by Morning Consult, 10.2021



### Teen Knowledge Gap (Age 13-17)

#### Perception of harm can be a protective factor













## BEST PRACTICES CLEARINGHOUSE



#### Kristen Gustafson

SECONDARY HEALTH & PE CURRICULUM, INSTRUCTION, AND ASSESSMENT DIRECTOR TEACHER ON SPECIAL ASSIGNMENT (TOSA) BEAVERTON SCHOOL DISTRICT, OR



## Strategies to Prevent and Intervene in Fentanyl Use

What are some initiatives, interventions, and strategies to prevent fentanyl use among students or to intervene if a student is using or has overdosed on fentanyl?

### Many People Who Use Fentanyl Don't Know They Are Using It

- Our surveys ask people what they think they used, not what they really used-unless people test their drugs they have no way of knowing for sure.
- People who buy or are given drugs may be seeking an opioid pill, an antianxiety medicine or a stimulant including prescribed stimulants like amphetamines, Ritalin and Adderall or illicitly produced cocaine or methamphetamine and end up with a counterfeit pill or powder tainted by fentanyl
- Uneven distribution of fentanyl in counterfeit pills can mean drugs from the same sources greatly vary in fentanyl quantity and so even fentanyl tolerance cannot protect people

### Naloxone: the antidote for opioid overdose

- High affinity for the opioid receptor binds to it and essentially removes other opioids reversing opioid related overdose
- Nasal and injectable products for lay people
- People with opioid addiction often are aware of the need to carry naloxone
- Others who encounter misbranded pills (E.g., Adderall or Xanax) or powder drugs (cocaine or methamphetamine) may not understand the need to carry naloxone.
- Youth, parents and educators should have naloxone or access to it









### Thank You!

Should you have any questions, please contact us at <a href="NCSSLE@air.org">NCSSLE@air.org</a> or 800-258-8413. We are happy to help!

**NCSSLE** Website

https://safesupportivelearning.ed.gov

Best Practices Clearinghouse

https://bestpracticesclearinghouse.ed.gov/

Next Lessons from the Field Webinars

February 8, 2023: Preventing and Addressing Fentanyl Use

February 22, 2023: Female Genital Mutilation



#### Feedback Form







[NCSSLE] 2023 - Lessons from the Field - Part 1: Knowing the Facts About Fentanyl

1. Prior to the webinar, how knowledgeable were you about the webinar's topic?

Thank you for attending the webinar, Part 1: Knowing the Facts About Fentanyl, on January 17, 2022. To best serve you, we would greatly appreciate receiving your feedback on the webinar.

Not At All Knowledgeable	
Somewhat Knowledgeable	
Very Knowledgeable	
2. Overall this webinar was a good use of my time.	
Strongly Disagree	
Somewhat Disagree	
Somewhat Agree	
Strongly Agree	
3. This webinar improved my understanding of the covered topic.	
Strongly Disagree	
Somewhat Disagree	
O Somewhat Agree	
Strongly Agree	

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#### Live Q&A